

AMENDMENTS TO THE CLAIMS:

The present Amendment has been prepared in accordance with a revised format established by the U.S. Patent and Trademark Office, as permitted in the Pre-OG Notice entitled "Amendments in a Revised Format Now Permitted."

Please [✓]cancel Claims 61-67 without prejudice or disclaimer of the subject matter presented therein.

Please amend Claims 68-70, and add new Claims 71-74, as follows. In accordance with the revised amendment format, all claims are presented below.

1-67 (Cancelled)

68. (Currently Amended) A process for crystal growth by using a crystal growth apparatus comprising a crucible for holding a crystal material, a heating means which is capable of forming at ~~the~~ a periphery of the crucible a temperature gradient within a temperature range including a melting point of the crystal material, a supporting means for supporting a center bottom of the crucible, a cooling means provided at the supporting means, and a temperature detecting means provided at the bottom of the crucible for detecting a temperature distribution ~~within a plane of cross section~~ across a first plane at the bottom of the crucible, the process comprising the steps of:

detecting the temperature distribution ~~within a plane of cross section~~ across said first plane of the crucible; and

controlling the heating means and the cooling means such that in the detected temperature distribution ~~within a plane of a cross section~~ across said first plane of the crucible, a temperature almost at a center portion of said first plane of the crucible is minimized ~~in the cross section~~.

69. (Currently Amended) The process according to ~~claim~~ claims 68, 71, 72, 73, or 74, wherein ~~cooling by said step of controlling~~ the cooling means is effected by adjusting a flow rate of cooling medium flowed into the cooling means.

70. (Currently Amended) The process according to ~~claim~~ claims 68, 71, 72, 73, or 74, wherein the temperature detecting means ~~is~~ includes a plurality of thermocouples ~~provided in cross-section of the crucible and said step of detecting the temperature distribution is effected by said thermocouples.~~

71. (New) The process according to claim 68, wherein the interior of the crucible is divided into plural layers by a plurality of disks formed across respective cross-sections of the crucible, wherein the temperature detecting means is further provided in the disks, and wherein said process further comprises the step of detecting a temperature distribution across said respective disks.

72. (New) The process according to claim 71, wherein each disk has an opening at almost its center.

73. (New) A process for crystal growth by using a crystal growth apparatus comprising a crucible for holding a crystal material, the crucible being divided into plural layers by a plurality of disks formed across respective cross-sections of the crucible, the crystal growth apparatus further comprising a heating means which is capable of forming at a periphery of the crucible a temperature gradient within a temperature range including a melting point of the crystal material, a supporting means for supporting a center bottom of the crucible, a cooling means provided at the supporting means, and a

temperature detecting means provided in at least one of the disks for detecting a temperature distribution across that disk, the process comprising the steps of:

detecting the temperature distribution across said at least one of said disks; and

controlling the heating means and the cooling means such that in the detected temperature distribution across said at least one disk, a temperature almost at a center portion thereof is minimized.

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74. (New) The process according to claim 73, wherein each disk has an opening at almost its center.